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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Yong Rui

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27662

7590

12/28/2004

LYON & HARR, LLP
300 ESPLANADE DRIVE, SUITE 800
OXNARD, CA 93036

EXAMINER

ENG, GEORGE

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/681,843	Applicant(s) RUI ET AL.	
	Examiner George Eng	Art Unit 2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15 and 17-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15 and 17-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office action is in response to the amendment filed 9/4/2004.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-5, 7-9, 15, 17, 25-27 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (US PAT. 5,877,801 hereinafter Martin) in view of Gutta et al. (US 20020101505A1 hereinafter Gutta).

Regarding claim 1, Martin discloses an automatic event presentation system (10, figure 1) for capturing and viewing an event having event participants comprising a camera system (18, figure 1) for providing image of the event and filming the events, an automated online broadcasting system (50, figure 1) that broadcast the event and a viewer platform (26, figure 1) in communication with the automated online broadcasting system that allows the remote participants to view the broadcasted (abstract and col. 3 line 34 through col. 4 line 21). Martin differs from the claimed invention in not specifically teaching the camera system that provides a seamless omni-directional image of the event that automatically tracks event participant simultaneously to determine the event participants that are speaking using audio analysis including a microphone-array sound source localization technique to alleviate camera view switching delays and the automated online broadcasting system including a tracker module that controls and uses the camera system and video tracking techniques to monitor and keep track of each of the tracked event participants simultaneously. However, Gutta teaches an improved technique for predicting events comprising a camera system (305, figure 3) that provide a seamless omni-direction image of an event and that automatically tracks event participant simultaneously to determine the event participants that are speaking using audio analysis including a microphone-array sound source localization technique (16, figure 3) to alleviate camera view switching delays and a tracking module (300, figure 3) within the system that controls and uses the camera system and video tracking techniques to monitor and keep track of each of tracked event participants simultaneously in order to provide a predictive value to the camera system, thereby the camera system can focus on the predicted speaker as soon as the participant begins to speak ([0018] through [0036]). Therefore, it would have been obvious to a

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person of ordinary skill in the art at the time the invention was made to modify Martin in having the camera system that provides a seamless omni-directional image of the event that automatically tracks event participant simultaneously to determine the event participants that are speaking using audio analysis including a microphone-array sound source localization technique to alleviate camera view switching delays and the automated online broadcasting system including a tracker module that controls and uses the camera system and video tracking techniques to monitor and keep track of each of the tracked event participants simultaneously, as per teaching of Gutta, in order to provide a predictive value to the camera system, thereby the camera system can focus on the predicted speaker as soon as the participant begins to speak.

Regarding claims 2-4, Martin teaches the camera including a wide-angle imaging device (col. 3 lines 40-43), as well as Gutta ([0021]) so that one skill in the art would recognize the camera having a wide-angle view approximately 360 degrees in order to eliminate the bulk of an additional camera.

Regarding claim 5, Martin discloses a switching module (38, figure 1) for allowing switching between of the image of the event (col. 4 lines 1-48).

Regarding claim 7, Martin teaches the camera control system further comprising means for finding and indexing the event participants (col. 7 lines 39-55).

Regarding claim 8, Martin discloses a method for filming and recording an event having event participants and presenting the event to a viewer, comprising the steps of using a camera system (18, figure 1) for filming and recording the event to provide an image that contains the event participants, automatically determining a location of the event participant in the image, providing a user interface (38, figure 1) that allows a choice of which of the event participants in

the image to view, the choice being made by at least one of manually by the viewer or a form of computerized input, i.e., automatically by a virtual director, and switching between views of the event participants in the image in response to the choice (col. 1 lines 45-51 and col. 3 line 34 through col. 4 line 21). Martin differs from the claimed invention in not specifically teaching the steps of using the camera system to provide a seamless omni-directional image that contains each of the event participants, determining the location of the event participants automatically by using a speaker detecting technique to determine the event participants that are speaking and tracking multiple event participants simultaneously using the speaker detecting techniques and a video tracking technique. However, Gutta teaches an improved technique for predicting events comprising a camera system (305, figure 3) that provide a seamless omni-direction image of an event and that automatically tracks event participant simultaneously to determine the event participants that are speaking using audio analysis including a microphone-array sound source localization technique (16, figure 3) to alleviate camera view switching delays and a tracking module (300, figure 3) within the system that controls and uses the camera system and video tracking techniques to monitor and keep track of each of tracked event participants simultaneously in order to provide a predictive value to the camera system, thereby the camera system can focus on the predicted speaker as soon as the participant begins to speak ([0018] through [0036]). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Martin in having the steps of using the camera system to provide a seamless omni-directional image that contains each of the event participants, determining the location of the event participants automatically by using a speaker detecting technique to determine the event participants that are speaking and tracking multiple event

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participants simultaneously using the speaker detecting techniques and a video tracking technique, as per teaching of Gutta, in order to provide a predictive value to the camera system, thereby the camera system can focus on the predicted speaker as soon as the participant begins to speak.

Regarding claim 9, Martin teaches a computer readable medium having computer-executable instructions for performing an operation (col. 1 lines 45-51 and col. 4 lines 9-11).

Regarding claims 15, Gutta teaches to obtain multiple camera views from the omnidirectional image and further comprising using the speaker detection technique to follow event participants that are speaking by switching from one camera view to another camera view ([0036] through [0038]).

Regarding claim 17, Martin discloses the omnidirectional camera system being one of a single panoramic camera and an array camera having an approximately 360-degree field-of-view (col. 4 line 62 through col. 5 line 6).

Regarding claim 25, Gutta teaches to require no physical movement to capture the event participants ([0019]).

Regarding claims 26-27, Martin teaches a user interface (38, figure 1) on the viewer platform that allows an arbitrary number of viewers to view an arbitrary number of viewpoints of the broadcast event, wherein the image provide an infinite number of viewpoints with each of the viewpoints corresponding to a portion of the image so that instantaneous switching is supported for an infinite number of viewers that select arbitrarily different view point (col. 4 lines 1-48).

Regarding claim 29, the limitations of the claim are rejected as the same reasons set forth in claim 8.

Regarding claim 30, Martin teaches a plurality of viewer platforms (62, figure 3) in communication with the automated online broadcasting system (50, figure 3) that allows a plurality of remote viewers to simultaneously view different views of the broadcasted event (col. 4 line 49 through col. 5 line 6).

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (US PAT. 5,877,801 hereinafter Martin) in view of Gutta et al. (US 20020101505A1 hereinafter Gutta) as applied in claim 1 above, and further in view of Washino et al. (US PAT. 5,625,410 hereinafter Washino).

Regarding claim 6, the combination of Martin and Gutta differs from the claimed invention in not specifically teaching the camera system having a resolution of approximately 1000 by 1000 pixels. However, it is old and notoriously well known in the art of camera system having a high resolution of approximately 1000 by 1000 pixels in order to provide better quality of images to viewers, for example see Washino (col. 4 line 66 through col. 5 line 50). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Martin and Gutta including the camera having the resolution of approximately 1000 by 1000 pixels, as per teaching of Washino, in order to provide better quality of images to viewers.

5. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (US PAT. 5,877,801 hereinafter Martin) in view of Gutta et al. (US 20020101505A1 hereinafter Gutta) as applied in claim 8 above, and further in view of Kannes (US PAT. 5,382,972).

Regarding claims 10-13, the combination of Martin and Gutta differs from the claimed invention in not specifically teaching to store annotation associated with the event and synchronizing this annotations with the event for allowing the view to select which of the annotation to store while the event is occurring or after the event occurring, wherein the annotations is a digital chat regarding the event. However, Kannes teaches such (col. 11 line 10 through col. 13 line 36). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Martin and Gutta in storing annotation associated with the event and synchronizing this annotations with the event for allowing the view to select which of the annotation to store while the event is occurring or after the event occurring, wherein the annotations is a digital chat regarding the event, as per teaching of Kannes, in order to make user friendly.

6. Claims 18-24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. (US PAT. 5,877,801 hereinafter Martin) in view of Gutta et al. (US 20020101505A1 hereinafter Gutta) and Ono (US PAT. 6,133,941).

Regarding claim 18, Martin discloses a method for filming and recording an event having event participants and presenting the event to a viewer, comprising the steps of using a camera system (18, figure 1) for filming and recording the event to provide an image that contains the event participants, transmitting images from a broadcasting platform (50, figure 1) to a viewer platform (62, figure 1), using the viewer platform to allow a view to select which portion of the image of the view would like to view and switching instantaneously between views of the image by presenting a desired portion of the image as selected by the viewer. Martin differs from the

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claimed invention in not specifically teaching automatically tracking multiple event participants simultaneously using audio and video processing techniques and a single omni-direction camera system having a single camera to produce the seamless omni-directional image. However, Gutta teaches an improved technique for predicting events comprising a camera system (305, figure 3) that provide a seamless omni-direction image of an event and that automatically tracks event participant simultaneously to determine the event participants that are speaking using audio analysis including a microphone-array sound source localization technique (16, figure 3) to alleviate camera view switching delays and a tracking module (300, figure 3) within the system that controls and uses the camera system and video tracking techniques to monitor and keep track of each of tracked event participants simultaneously in order to provide a predictive value to the camera system, thereby the camera system can focus on the predicted speaker as soon as the participant begins to speak ([0018] through [0036]). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Martin in having automatically tracking multiple event participants simultaneously using audio and video processing techniques and a single omni-direction camera system having a single camera to produce the seamless omni-directional image, as per teaching of Gutta, in order to provide a predictive value to the camera system, thereby the camera system can focus on the predicted speaker as soon as the participant begins to speak ([0018] through [0036]). Although neither Martin nor Gutta specifically teaches to use a computer network for transmitting the image from the broadcasting platform to the viewer platform, it is old and notoriously well known in the art of using a computer network for transmitting image from a server to a client device in order to improve the operability, for example see Ono (figure 1 and col. 4 lines 13-18). Therefore, it

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would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Martin and Gutta in using the computer network for transmitting the image from the broadcasting platform to the viewer platform, as per teaching of Ono, in order to improve the operability.

Regarding claim 19, Martin teaches the viewer selecting to view to view multiple portions of the image (col. 4 lines 1-48).

Regarding claim 20, Gutta teaches to contain all event participants (22, figure 1) within the event environment ([0018]).

Regarding claim 21, the limitations of the claims are rejected as the same reasons set forth in claim 18.

Regarding claims 22-23, Martin teaches a user-operated controller for selecting multiple camera views of the event (col. 4 lines 1-48) so that one skill in the art would recognizes the system comprising a switching module for providing instantaneous switching between the multiple camera views of the event in respond to a command signal.

Regarding claim 24, Gutta teaches to provide a predictive value that allows switching to a camera view of a person speaking before the person who begins to speak ([0058]).

Regarding claim 28, Martin teaches to transmit the image to the viewer platform over a phone line (22, figure 1) transmit a low-resolution version of the omni-directional image to the viewer platform, wherein the omni-directional image produced by the omni-directional camera system is a high-resolution omni-directional image, selecting which portion of the omni-directional image to view, the selection being made by at least one of manually by the viewer

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and automatically by a virtual director module, and transmitting the selected portion to the viewer platform (col. 4 line 1 through col. 5 line 6).

Response to Arguments

7. Applicant's arguments with respect to claims 1-13, 15, 17-20 and 25-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Maeng (US PAT. 5,959,667) discloses a voice activated camera preset selection system (abstract). Nishimura et al. (US PAT. 5,631,697) discloses a video camera capable of automatic target tracking (abstract).

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

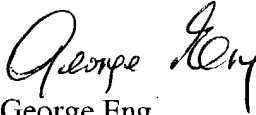
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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Eng whose telephone number is 703-308-9555. The examiner can normally be reached on Tue-Fri 7:30 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A. Kuntz can be reached on 703-305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


George Eng
Primary Examiner
Art Unit 2643